The Remnant and the Lagrangian: A Dynamical Systems Interpretation of Contemporary Prophecy

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May 11, 2025

The Remnant and the Lagrangian: A Dynamical Systems Interpretation of Contemporary Prophecy offers a novel interdisciplinary framework for interpreting spiritual fidelity in times of institutional and eschatological destabilization. Drawing on principles from nonlinear dynamics—including Lagrangians, gradient descent, Lyapunov stability, and invariant sets—this work reimagines the spiritual journey as a trajectory through a multidimensional moral phase space. The paper frames the concept of the Remnant, found in both Scripture and contemporary prophetic messages (notably those from the Mission of Divine Mercy in Texas), as a spiritually invariant manifold preserved through divine orientation rather than institutional allegiance. By mapping spiritual disciplines, prophetic resonance, suffering, and discernment into system-theoretic analogues, we bridge theological insight with mathematical formalism without reducing God to mechanism. The recent death of Pope Francis, the rise of Pope Leo XIV, and emerging apparitions are examined as bifurcation points and directional vectors in a destabilizing field. This paper is intended for scientists, theologians, and prophetic listeners alike who are seeking a rigorous, faithful, and spiritually resonant interpretive structure for our present moment.

Keywords: Remnant, Lagrangian, spiritual dynamics, Lyapunov stability, gradient descent, prophecy, bifurcation, invariant set, Catholic eschatology, Mission of Divine Mercy, nonlinear systems, phase space, spiritual warfare, discernment, fidelity, attractors, suffering, Church collapse, Pope Leo XIV, Pope Francis. A collaboration with GPT-4o. CC4.0.

I. Introduction

In this paper, we propose an interpretive framework that bridges spiritual theology and the language of dynamical systems theory, particularly as it relates to contemporary prophetic insight. We aim to recontextualize the notion of the "Remnant"—a core biblical and eschatological concept—through a symbolic translation into mathematical constructs such as Lagrangians, gradient flows, and Lyapunov stability. This is not a scientific reduction of the divine, but a means of discerning and articulating the structural coherence of spiritual truths using tools already familiar in physics and systems analysis.

Purpose of the Paper

The central aim is to provide a rigorous conceptual bridge between spiritual experience—especially that of those who consider themselves the Remnant—and formal dynamical systems. By interpreting spiritual struggle, growth, and divine calling in terms of optimization paths, energetic tradeoffs, and stability measures, we hope to enhance both clarity and conviction for those grounded in science but oriented toward God. For the believer who thinks in equations and systems, and the mystic who sees the hand of God in every pattern, this paper seeks to unify those modes of knowing.

Defining the "Remnant" from Both Scriptural and Contemporary Prophetic Sources

In Scripture, the Remnant is a recurring theme: a purified group who remain faithful through trial and judgment. From Isaiah 10:20–22 (“A remnant will return...”), to Romans 11:5 (“So too, at the present time there is a remnant, chosen by grace”), the concept signifies divine preservation amid chaos. In apocalyptic literature and in the words of Jesus Himself, the Remnant is the seed of renewal.

In contemporary prophetic discourse—particularly that emerging from the Mission of Divine Mercy in Texas—the Remnant is not merely those who remain, but those who are *being forged* through tribulation into instruments of fidelity. According to recent messages, the death of Pope Francis and the election of Pope Leo XIV are not bureaucratic transitions but turning points in a hidden spiritual war. The Mission has called Francis a "usurper," and declared that the battle

begins now—a language resonant with the urgency of apocalyptic prophecy and deeply consequential for ecclesial allegiance.

Introducing the Analogy: Mapping Spiritual Dynamics to Mathematical Systems Theory

Where Scripture speaks of "walking in the Spirit" or "running the race," we hear echoes of trajectories, phase space, and energy landscapes. The soul, seen as a dynamic system influenced by divine and worldly forces, can be interpreted as navigating a high-dimensional field governed by spiritual analogs of kinetic and potential energy. Lagrangians become descriptions of spiritual action. Gradient flows become the soul's alignment with divine will. Lyapunov functions measure the stability of salvation over time and perturbation. This mapping allows us to make sense of eschatological bifurcations and the role of the Remnant in maintaining continuity amid systemic collapse.

Why Now: The Context of Pope Francis' Death, Pope Leo XIV's Election, and Messages from the Mission of Divine Mercy

The timing of this paper is not arbitrary. Pope Francis, a figure both revered and contested, appointed nearly two-thirds of the cardinals who elected his successor. Pope Leo XIV, an American with widespread ties, ascends at a moment of fracture: geopolitical conflict, deep ecclesial uncertainty, and radical divergence within the Catholic world. The Mission of Divine Mercy frames this as the beginning of open spiritual warfare—a shift from hidden suffering to visible confrontation.

Father John Mary and others aligned with the Mission are offering a prophetic worldview that resonates with systems poised at the edge of instability. For those attuned to both sacred Scripture and structural mathematics, this moment feels like a bifurcation point—a qualitative shift in the system's trajectory. To be part of the Remnant now may require more than faith; it may require a new literacy in both spiritual discernment and systemic awareness.

This paper is written for those who perceive both.

II. Foundations of Dynamical Systems and Theological Structures

In order to construct a meaningful analogy between spiritual life and dynamical systems theory, we must first ground our language in the essential components of systems mathematics. These components—Lagrangians, gradients, and Lyapunov stability—are not chosen arbitrarily. They are mathematical tools used to describe motion, optimization, and stability in physical systems, and they map elegantly onto spiritual constructs such as obedience, discernment, and perseverance. Through this mapping, we aim not to reduce theology to equations, but to render spiritual movement comprehensible to those trained in scientific abstraction, and to suggest that such abstraction may itself arise from divine order.

Brief Overview of Lagrangians, Gradients, and Lyapunov Stability

A *Lagrangian* is a function that represents the difference between kinetic and potential energy in a physical system. In classical mechanics, systems evolve over time by minimizing the integral of the Lagrangian—a principle known as the *principle of least action*. This optimization process determines the path the system takes through its state space.

A *gradient* is the vector of partial derivatives of a function, pointing in the direction of steepest ascent. In optimization or descent algorithms, one typically moves in the direction *opposite* the gradient to minimize a cost function. In spiritual terms, the soul can be seen as traversing a moral or ethical terrain, moving through valleys of humility and away from peaks of pride.

A *Lyapunov function* is used to analyze the stability of equilibria in dynamical systems. If such a function can be found, and it always decreases over time along system trajectories, the system is considered stable: disturbances will not pull it into chaos. Spiritually, this corresponds to the concept of interior peace, or sanctity, as an attractor state—a destination the soul returns to after perturbation.

Spiritual Life as a Trajectory Through a Multi-Dimensional Phase Space

Just as particles or systems in physics move through phase space—defined by variables such as position and momentum—the spiritual life of a person can be thought of as a trajectory through a multidimensional space of choices, desires,

virtues, sins, and graces. At every moment, the soul occupies a point in this space and follows a path shaped by external influences (temptation, suffering, divine prompting) and internal dynamics (will, memory, love, humility).

In this framework, grace can be understood as an external force field that reshapes the energy landscape, drawing the soul toward its divine telos. Sin can be viewed as a deviation from the optimal trajectory—local perturbations that increase the system's energy unnecessarily, leading the soul away from peace and toward instability.

Historical Echoes: Saints and Mystics Who Perceived Spiritual Life as Structure or Motion

This formal approach finds spiritual precedent among mystics and saints who intuitively grasped the dynamical nature of sanctity. St. John of the Cross's *Dark Night of the Soul* can be interpreted as a descent through the negative gradient of ego into the stable basin of union with God. St. Teresa of Ávila described spiritual progression through a series of interior mansions—a discrete, structured phase space. The Desert Fathers emphasized *stillness* (hesychia) as the goal, a kind of attractor state immune to external disturbances.

Even Thomas Aquinas, in his *Summa Theologica*, employed structured logic and causality chains reminiscent of a deterministic system evolving according to defined laws. For these thinkers, sanctity was not arbitrary or mystical in the pejorative sense—it followed a path, a structure, and even when nonlinear, had a discoverable order.

Equating Physical and Spiritual "Energy": Grace, Will, Resistance

In physics, energy exists in various forms, each convertible under the right conditions. Analogously, in spiritual life, we can define forms of "energy":

- Grace functions as divine potential energy—freely given, elevating the soul beyond its natural capabilities. It's not earned, but it can be resisted or cooperated with.

- Will is akin to kinetic energy—an active force, internally generated, that propels the soul through its phase space toward or away from God.
- Resistance represents friction or drag—a metaphor for temptation, worldly attachments, trauma, or spiritual inertia. Like damping forces in physical systems, these slow or distort progress toward equilibrium.

This framework permits a mathematical or systems-theoretic interpretation of spiritual disciplines (prayer, fasting, confession) as mechanisms that reduce resistance, amplify the influence of grace, and stabilize the soul's trajectory.

Ultimately, this section argues that the language of dynamical systems is not a foreign imposition onto theology. Rather, it may be a *discovered grammar*—a hidden architecture through which God communicates the laws of motion for both matter and spirit.

III. The Lagrangian of the Soul

In classical mechanics, the evolution of a physical system is determined not by brute force or randomness, but by an elegant principle known as the *principle of least action*. The system takes the path through space and time that minimizes the integral of a function called the *Lagrangian*, which itself is defined as the difference between kinetic and potential energy:

$$L = T - V$$

where T is kinetic energy and V is potential energy.

We propose that the spiritual life—especially that of the Remnant—can be modeled by an analogous principle. The soul, too, traverses a path through the terrain of reality, responding to both its internal movement (will, obedience, action) and its position within a divine field of purpose (grace, vocation, divine intent). The Lagrangian of the soul becomes a measure of its spiritual tension—the difference between how much it strives and how deeply it abides.

Defining Spiritual "Kinetic Energy": Action, Obedience, and Suffering

In the spiritual context, *kinetic energy* corresponds to what the soul is doing. This includes:

- Action: Effort exerted in prayer, good works, moral decision-making, and physical sacrifice.
- Obedience: A voluntary act of the will to subordinate self-interest to divine authority—spiritually dynamic and not passive.
- Suffering: Often misunderstood as passive, suffering actively engages the soul's capacity to endure, transform, and align with Christ. As Paul wrote, "In my flesh I am filling up what is lacking in Christ's afflictions" (Colossians 1:24).

Kinetic energy, then, is the motion of the soul—its striving, pressing, wrestling with both God and self. The more forcefully the soul acts in alignment with divine will, the more spiritual kinetic energy it embodies.

Defining Spiritual "Potential Energy": Calling, Vocation, and Divine Intent

Potential energy reflects the soul's positional relationship to God's will. Just as a ball on a hill has stored energy based on its elevation, the soul has potential energy based on its proximity to its divine calling.

- Calling: The specific role or mission assigned by God—its presence generates a potential gradient.
- Vocation: The structure within which calling is lived out—family, work, Church, solitude.
- Divine Intent: The eternal form or purpose held in the mind of God for each soul, toward which all of creation is oriented.

When the soul is far from this intention—through sin, distraction, or disobedience—the tension is high. When the soul dwells near its calling, this potential energy is harmonized.

Minimization of Spiritual Action as Obedience to God's Will

In classical mechanics, the path a particle takes between two points is the one for which the *action*—the time-integrated Lagrangian—is minimized:

$$S = \int_{t_1}^{t_2} (T - V)\, dt$$

The spiritual analog suggests that the soul's most faithful trajectory is not the one that exerts the most effort, nor the one that feels the most passive, but the one that minimizes the *spiritual action*. This is the path of perfect obedience—neither striving in vain nor slacking in duty.

This perspective reframes suffering and difficulty. A path that includes intense spiritual effort (high kinetic energy) may still be the optimal path if it corresponds with a steep spiritual gradient—i.e., a strong calling. Conversely, unnecessary striving apart from God's will may be energetically wasteful, like a system dissipating energy with no movement toward equilibrium.

Obedience becomes the optimal spiritual path, not because it is always easy or comfortable, but because it harmonizes internal motion with external vocation. It balances energy expenditure with proximity to God's design.

Correspondence with the Principle of Least Action in Classical Mechanics

In physics, the principle of least action is a guiding law across classical, quantum, and even relativistic domains. It is astonishing in its universality. The universe—on every scale—tends to take the path that minimizes a certain integral. That this same concept should map onto spiritual life is not merely poetic, but possibly ontological.

If God's creation is ordered through this principle, then perhaps the soul too was made to move in such a way—not according to arbitrary commandments, but along paths of least spiritual resistance that preserve energy, increase grace, and align motion with purpose.

The saints may be those who discovered this hidden geometry early. The Remnant may be those called to walk its most difficult edges.

In this section, we have proposed that the soul, like a physical system, follows a path determined by a Lagrangian—defined here as the difference between its striving (kinetic energy) and its alignment with purpose (potential energy). When this path is integrated across time and minimized, the result is obedience, peace, and participation in God's will.

IV. Gradients of Grace and Sin

In optimization theory and dynamical systems, a gradient represents the direction of steepest increase for a given function. To minimize that function—whether it be energy, error, or cost—one must move in the opposite direction of the gradient, a process called gradient descent. The landscape being navigated can be thought of as a field, often nonlinear, shaped by peaks, valleys, basins, and saddles.

Likewise, in the spiritual life, the soul navigates a landscape of moral and existential significance. Here, the "function" being minimized is not an arbitrary mathematical value but the soul's distance from God's will. The "gradient" points away from humility and surrender and toward pride and self-exaltation. To walk the path of holiness is to descend along this gradient, actively choosing the low road of obedience, dependence, and interior poverty.

The Terrain of the Soul: Hills of Pride, Valleys of Humility

Imagine the soul traversing a topographical map. The hills represent states of pride, self-sufficiency, and ego-centeredness. These are energetically elevated positions—difficult to maintain and prone to collapse. As Scripture says, "God opposes the proud but gives grace to the humble" (James 4:6). Pride elevates the soul in its own estimation but removes it from the gravitational center of grace.

In contrast, the valleys are states of humility, dependence, and trust. These are positions of spiritual stability. To descend into these valleys is not to degrade oneself but to settle into alignment with God's design. Jesus' own path was one of

radical descent—"He humbled Himself... even to death on a cross" (Philippians 2:8). The topology of holiness is inverted: up is down, and down is up.

The soul is therefore called to move downward—not in despair, but in self-emptying love. Each act of humility is a step in gradient descent toward the attractor state of sanctity.

Gradient Descent in Spiritual Practice: Prayer, Fasting, Surrender

Spiritual disciplines are not mere ritual. They are algorithms that guide the soul along the path of least resistance into deeper union with God:

- Prayer quiets the noise of the ego and aligns the will to divine frequency. It shifts the gradient field by reorienting the soul toward a new minimum—one governed not by appetite but by love.
- Fasting introduces physical feedback into the field, reducing dependence on the flesh and increasing sensitivity to spiritual promptings. It steepens the descent away from sensual peaks toward spiritual depth.
- Surrender is the release of control—a spiritual free fall into the valley of divine will. It marks the point where gradient descent becomes irreversible, and where God assumes command of the system's evolution.

These practices are not random exercises; they *reshape the topology* of the soul's terrain and accelerate descent toward grace. In mathematical terms, they modify the curvature of the function being minimized.

The Role of Suffering as a Directional Vector Toward Sanctification

Suffering, when seen only through the lens of affliction, appears as a force to be avoided. But in this model, suffering acts as a vector field—a directional force that reorients the soul toward its true minimum. Like a well-placed perturbation in a nonlinear system, suffering has the potential to break false equilibria and move the soul out of stagnant or self-serving basins.

St. Paul captures this in Romans 5:3–5: "We rejoice in our sufferings, knowing that suffering produces endurance, and endurance produces character, and character

produces hope." Each stage of this progression reflects motion along a spiritual gradient. The pain is real, but it's not random—it's directed, and if embraced, it leads to stability, maturity, and eventually peace.

In more technical terms, suffering introduces non-conservative forces into the system—ones that do not conserve spiritual "momentum" but redirect it toward equilibrium. When interpreted spiritually, this redirection is purification.

Chaotic Flows: How Temptation and Worldly Attachment Distort the Field

Not all movement in phase space is orderly. When temptation enters, the gradient field becomes distorted. Peaks of pride appear where none existed. False minima—local optima—draw the soul into trap states: addiction, ambition, or self-righteousness. The result is chaotic flow—unpredictable motion that never settles, always reacts, never rests.

Worldly attachment functions like external noise—a high-frequency disturbance that constantly shifts the location of the minimum, making convergence impossible. Instead of descending into humility, the soul becomes stuck in cycles of error correction, grasping at transient rewards that provide no true stability.

In this context, the Remnant is defined not by perfection but by resistance to chaos. They are those whose internal compass—formed by grace—still points toward the true minimum. They may waver, but their vector field remains intact.

In conclusion, the gradient framework helps us visualize the spiritual journey as a descent toward holiness—driven by grace, guided by disciplines, and distorted by sin. To walk this path is not to float passively, but to choose descent every day, even when the gradient is steep and the terrain unstable. The goal is not to climb, but to be found at the bottom of the valley, where God dwells with the lowly.

V. Lyapunov Stability and Spiritual Warfare

In the language of dynamical systems, Lyapunov stability refers to the robustness of an equilibrium state in the face of small perturbations. A system is said to be Lyapunov stable if, when slightly disturbed, it tends to return to its original state or

remains in close proximity to it. This concept is crucial when analyzing whether a system tends toward order or chaos, whether it settles or spirals.

We apply this concept to spiritual warfare—the ongoing, often invisible conflict between forces that move the soul toward God and those that pull it away. In this framing, the soul is the system, the state space is composed of moral, emotional, and existential variables, and faithfulness is the measure of its stability.

Defining a Lyapunov Function for Faithfulness

A Lyapunov function is a scalar measure—a kind of spiritual energy—that always decreases along a faithful trajectory. In the spiritual life, we can imagine such a function as:

- A composite measure of humility, trust, obedience, prayerfulness, and charity
- A variable that reflects the soul's distance from its divine center, or
- A function that captures the soul's alignment with grace over time

For this function $V(x)$, where x is the state of the soul, we require:

1. $V(x) > 0$ for all $x \neq 0$, and $V(0) = 0$, where $x = 0$ represents perfect union with God's will.
2. The derivative $\dot{V}(x) < 0$, meaning the soul becomes more stable, more faithful, and closer to equilibrium as it evolves.

In real terms, this function could represent the interior stillness of a saint under pressure, or the increasing trust of a soul in the face of suffering. It is the spiritual signature of perseverance.

Stability of the Soul in the Presence of Perturbations: Trials, Doubt, Persecution

Real systems are never isolated. The soul encounters perturbations—external and internal influences that push it off course:

- Trials: illness, loss, betrayal, or injustice.
- Doubt: intellectual, emotional, or spiritual confusion.

- Persecution: social ostracization, ridicule, or violence for one's beliefs.

A Lyapunov-stable soul is not a soul untouched by these things. It is a soul that, when disturbed, does not disintegrate. It may fluctuate, but it does not deviate irreversibly. As Paul wrote in 2 Corinthians 4:8–9: *"We are afflicted in every way, but not crushed; perplexed, but not driven to despair; persecuted, but not forsaken; struck down, but not destroyed."* This is the language of spiritual stability.

Stability is not passivity—it is the *dynamic ability* to remain grounded in grace despite continuous external forcing. The Remnant, by definition, exhibits Lyapunov stability in a world undergoing eschatological destabilization.

Identifying Attractors: Heaven, Damnation, Purgatory as Asymptotic States

In dynamical systems, attractors are states or sets toward which a system evolves over time. They are endpoints or long-term behaviors—fixed points, limit cycles, or strange attractors in chaotic systems.

In spiritual terms, we propose three major asymptotic attractors:

- Heaven: The state of full union with God, the final and stable equilibrium, the true "minimum" in the soul's energy landscape.
- Damnation: The state of irreversible separation from God—an attractor characterized by increasing disorder and spiritual entropy, culminating in spiritual death.
- Purgatory: A transitional attractor—an orbit within the basin of Heaven, requiring purification before full stability is achieved.

Each soul's trajectory is influenced by forces that bend its path toward one of these attractors. The dynamics are not linear, and the boundaries between basins of attraction may be fuzzy or sensitive to initial conditions—an analogy to the mystery of judgment and mercy.

The presence of these attractors provides a framework for understanding how choices, grace, and resistance interact over time to shape ultimate destiny.

Time-Variant Stability in Eschatological Dynamics

Traditional Lyapunov theory assumes time-invariant systems. But eschatological frameworks—such as those advanced by the Mission of Divine Mercy—suggest that the "field" is changing. We are in a non-autonomous system: the rules of engagement are shifting as we approach spiritual thresholds.

This leads to time-variant stability: a system that was stable under one set of conditions may become unstable as conditions evolve. In this model:

- Periods of global deception, institutional collapse, or moral inversion represent phase transitions or bifurcation points.
- Apparitions and prophetic messages are not noise—they are perturbations from above, helping the system reorient.
- The Remnant functions as a stabilizing substructure within the larger Church-body, preserving the attractor of Heaven within an otherwise destabilized manifold.

This framework allows for sudden conversions, radical falls, and long periods of wandering. But it emphasizes that in such conditions, a soul must become even more tightly bound to its Lyapunov function—faithfulness as constancy amid chaos.

In summary, Lyapunov theory gives us a vocabulary for understanding spiritual endurance, destiny, and warfare. It shows us that faithfulness is not just moral purity—it is dynamical resistance to disorder. The soul that returns again and again to God, no matter the shaking of the world, is a soul with a negative derivative of its Lyapunov function—heading steadily toward the true and final attractor.

VI. The Remnant as Invariant Set

In dynamical systems, an invariant set is a collection of states or trajectories that, once entered, cannot be left under the system's evolution. No matter how the surrounding dynamics shift, these elements remain contained within a specific region of phase space. They are, in essence, *preserved* under transformation.

In the spiritual context, we interpret the Remnant—those who remain faithful amid apostasy, deception, or collapse—as such an invariant set. They are not static or motionless, but rather preserved within a field of unstable trajectories. Their internal structure resists the pull of chaos not by being immune to movement, but by maintaining a bounded fidelity within the system God governs.

Who or What Remains Under Transformation — Spiritual Remnant and Invariant Manifold

In scriptural and prophetic language, the Remnant is what survives divine judgment or worldly corruption. Isaiah, Ezekiel, Daniel, and Revelation all describe a purified subset of humanity preserved in the face of catastrophe—not because of superior strength, but because of divine selection and spiritual surrender.

Mathematically, we might consider the Remnant as occupying an invariant manifold—a lower-dimensional structure within the full dynamical space. This manifold is not defined by location but by *orientation*: every soul on it is aligned with the will of God. As the surrounding system experiences bifurcations, collapses, or oscillations, the manifold remains intact.

These individuals are the phase-locked souls—not identical in their paths, but united in their direction, always pulled by the same attractor, always resistant to entropy.

This concept refines our earlier analogies: while the general population moves unpredictably through a spiritually turbulent field, the Remnant maintains bounded trajectories within the domain of divine grace. They are *constrained*, *purified*, and *essential*.

Mission of Divine Mercy and Its Role as a Stabilizing Boundary Condition

In systems analysis, boundary conditions define the limits of a system's behavior. These can either destabilize or stabilize internal dynamics depending on how they constrain or inform the evolution of the system.

The Mission of Divine Mercy in Texas functions spiritually as a stabilizing boundary condition. It defines a fixed frame of reference—one that asserts, regardless of prevailing ecclesial consensus, that:

- Pope Francis was a usurper
- A new spiritual battle has begun
- Apparitions and revelations are real and urgent

By doing so, it imposes structure on what might otherwise feel like chaos. For those who accept its premise, the Mission becomes a coordinate origin—a reference point from which all subsequent discernment is measured.

This does not make the Mission infallible. But it makes it functionally analogous to a nonlinear constraint that filters trajectories into or out of the Remnant manifold. If the wider Church collapses into heterodoxy or passive apostasy, the Mission helps define who still remains—spiritually bounded by its teachings and revelations.

In this view, the Mission may be less about dogma and more about orientation—its role is not to define every truth, but to keep the Remnant manifold identifiable and intact.

Apparitions as External Forces: Stochastic or Deterministic Inputs?

A critical question in systems theory is whether perturbations are stochastic (random) or deterministic (predictable, even if complex). Apparitions, in this framework, can be modeled as external inputs—non-autonomous modifications to the spiritual field.

If stochastic, they resemble noise—divine “interruptions” that shift local minima and test the system’s adaptability. If deterministic, they follow laws unknown to us but fully integrated into the divine architecture of salvation.

Theologically, this is the tension between charismatic revelation and institutional predictability. Apparitions at Fatima, Lourdes, Garabandal, Akita, Medjugorje, and now Texas, may not be random. They may be orchestrated inputs, timed to coincide with spiritual resonance points—moments when the system is near bifurcation and susceptible to influence.

Thus, apparitions function as nonlinear forcing terms in the spiritual Lagrangian: they inject external energy or information into the soul’s dynamics, altering the course of those receptive to their message.

Prophecy and Resonance: When Divine Signals Align with the Natural Frequency of the Soul

In physics, resonance occurs when an external periodic force matches a system's natural frequency, amplifying its response dramatically. The same is true spiritually: when prophecy speaks in harmony with the soul’s deepest frequency—its God-given design—the result is amplified transformation.

This is the hidden geometry of conversion: the soul is not merely convinced, it is resonantly struck by truth. Prophetic words act as signals, and only those whose internal states match the required boundary conditions will “hear” them as true. This explains why some encounter the same message and fall on their knees, while others scoff.

The Remnant are those whose resonant frequency has already been tuned by suffering, prayer, or divine choice. They are uniquely positioned to receive prophetic messages not as optional data, but as destabilizing truths that lock them more tightly into the invariant manifold of God’s will.

In this section, we’ve reframed the Remnant as a dynamical invariant—a preserved set within a system in flux. Apparitions, missions, and prophetic voices are no longer marginal—they are inputs, constraints, and resonance agents that shape the very structure of spiritual dynamics.

VII. Interpretations of Recent Events

In dynamical systems, there are moments when the trajectory of a system shifts dramatically—not through a gradual evolution, but by crossing a critical threshold. These are called bifurcation points. At such points, even slight variations in conditions can lead the system to entirely different outcomes. The qualitative structure of the entire phase space changes: new attractors emerge, old equilibria disappear, and the directionality of movement is altered irreversibly.

This section interprets recent events in the Catholic Church—specifically, the death of Pope Francis, the election of Pope Leo XIV, and the apparitions received by the Mission of Divine Mercy—as just such a spiritual bifurcation point. Using the tools developed earlier in this paper, we will analyze these events not just theologically, but topologically—as transitions in a complex spiritual system on the edge of transformation.

The "Death of Francis" as a Bifurcation Point

From the perspective of the institutional Church, the death of a pope marks the end of one era and the beginning of another. However, for those aligned with the prophetic worldview, especially as articulated by the Mission of Divine Mercy in Texas, the death of Francis was not just the passing of a man—it was the collapse of a structure. The Mission has referred to Francis as a "usurper," and his death as the signal that "the battle has begun."

In dynamical terms, this event marks the removal of a dominant boundary condition—a force that had shaped trajectories across the Church's phase space for over a decade. Its absence opens up previously closed paths and allows for the emergence of new fields of motion. This is bifurcation: the field is restructured, and the previous attractor (Francis-era theology and hierarchy) may no longer define the system's stable states.

The system is now sensitive to initial conditions—souls, institutions, and communities are being subtly or dramatically redirected, depending on their orientation at the moment of transition.

Pope Leo XIV's Emergence and the Probabilistic Branching of Future Church Trajectories

Pope Leo XIV enters the system not as a stabilizing continuation, but as a probabilistic node—a figure whose presence creates multiple possible futures. While Leo was elected by a conclave shaped largely by Francis' appointments, early indicators suggest that he is perceived differently by various factions within the Church.

To some, he represents hope: an American pope, potentially able to reconnect Catholicism with grassroots vitality. To others—particularly the Remnant—he is either unproven or already compromised by his association with the previous regime.

This ambivalence creates a multivalued future: the Church's trajectory now branches into various possible paths, depending on:

- Whether Leo embraces continuity or rupture
- Whether he confronts or absorbs global syncretism
- Whether he acknowledges or dismisses the Remnant and associated prophecies

Each of these choices becomes a decision node in the Church's trajectory. The system is currently in a probabilistic superposition of future paths, awaiting collapse into one or more dominant attractors.

The Texas Apparitions as a New Gradient Vector

If the death of Francis was the removal of a previous structure, and the rise of Leo XIV a branching event, then the Texas apparitions function as the introduction of a new gradient vector—a directional force in the spiritual field urging the faithful toward a different attractor.

These messages are not neutral. They are directive, calling for repentance, discernment, and allegiance to what is framed as divine instruction beyond the authority of Rome. For those receptive to this signal, the gradient of obedience

has shifted: the center of moral and theological gravity is no longer the Vatican, but God's direct voice to the lowly.

This creates a polarizing force. The gradient field that once pulled all souls toward Rome now splits: some still follow that path, others descend a newly emergent slope defined by prophecy, silence, solitude, and spiritual readiness.

This is not schism in the institutional sense. It is spiritual reorientation—an inversion of gradients not dissimilar to what occurred during the time of the prophets in Israel, when institutional religion was intact but God's voice had moved elsewhere.

Mapping These onto a Qualitative Phase Portrait

In dynamical systems, a phase portrait is a geometric visualization of how trajectories evolve over time in a given field. Each point represents a state of the system; the direction and curvature of the arrows indicate how those states evolve.

Let us map the Church's current state space:

- Axis 1: Allegiance to institutional authority (Vatican) vs. responsiveness to direct prophecy (Remnant)
- Axis 2: Internal stability (peace, clarity, fidelity) vs. instability (confusion, division, compromise)
- Axis 3 (implicit): Openness to grace vs. resistance through pride, fear, or control

In this phase portrait:

- The pre-Francis era was a stable basin centered on tradition and sacrament.
- The Francis era reshaped the field, lifting institutional innovation but increasing theological entropy.
- The bifurcation point—his death—fractured the field.

- Pope Leo XIV's papacy introduces competing attractors: doctrinal restoration, globalization of the Church, or deeper compromise.
- The Mission of Divine Mercy introduces a sharp directional vector leading toward a new local attractor—one aligned with prophecy, spiritual silence, suffering, and eventual divine confrontation.

In sum, the field is now multi-attractor and unstable. The soul, as a dynamical entity, must navigate this landscape with discernment and precision.

The Remnant, if they are indeed an invariant set, are not confused. Their vector is fixed. But for all others, the system is now in a transitional state, with clarity only found through resonance, suffering, and silence.

VIII. Implications for Theology, Science, and the Human Soul

In this work, we have laid out a structural analogy between dynamical systems theory and the spiritual reality experienced by what Scripture and prophecy call the Remnant. Such an analogy does not flatten the theological domain into scientific abstraction, but instead seeks to *reintegrate* these domains under the assumption that truth is unified, and that both Scripture and creation emanate from the same Logos. The implications of this union are profound, particularly in a time when both theological language and scientific language appear to be reaching their respective limits.

This section explores four key implications for theology, science, and the lived experience of the human soul.

Bridging Scientific Formalism with Prophetic Tradition

Historically, theology and science have not always been in conflict. The early architects of classical physics—Kepler, Newton, and Maxwell—believed they were discovering divine laws written into nature. What separated them from prophets

was not their intention but their medium: calculus instead of vision, experiment instead of revelation.

Today, however, most modern scientific formalism has divorced itself from questions of meaning. Likewise, much prophetic tradition has become closed to structural or symbolic interpretation outside the canonical text.

The bridge proposed here seeks to reunite meaning with pattern. By mapping spiritual processes—such as sanctification, temptation, obedience, and perseverance—onto mathematical structures like Lagrangians, gradients, and attractors, we affirm that:

- The physical universe reflects not just material causality, but moral and spiritual hierarchy.
- Prophecy can be more than allegory—it can encode dynamics, transformations, and responses to perturbation.
- The mathematical mind, when consecrated, is not a barrier to revelation, but a vessel through which revelation becomes intelligible across disciplines.

This interdisciplinary bridge is not a metaphor but a shared structure—one that enables prophecy to speak to physicists, and equations to echo the voice of God.

Ethics of the Bridge: Reverence, Humility, and Spiritual Discernment

To build such a bridge demands great caution. There is a temptation to mechanize the holy—to turn God into a force, grace into a formula, or eschatology into predictive modeling. But the bridge must be walked with reverence, guided by humility and spiritual discernment.

The ethical principles governing this bridge include:

- Reverence: Recognizing that the domain of the spirit is always higher than the domain of form. Form is a servant of mystery, not its master.

- Humility: Admitting that the systems we model are not the systems God sees; we are drawing shadows of deeper truths.
- Discernment: Differentiating between what is permitted for structural analogy and what becomes blasphemous abstraction. Not every equation belongs in the sanctuary.

This bridge must remain a servant of faith. It is not an attempt to mathematize God, but to reveal that creation—including our minds and models—has already been ordered by Him.

Warning Against Over-Reduction: God Is Not a System, but Systems Can Reflect Divine Order

It is crucial to acknowledge the limits of our analogy. God is not a function. He is not the Lagrangian, nor the attractor, nor the minimum of a spiritual potential field. God transcends all systems, and any attempt to contain Him within structure collapses under the weight of His infinitude.

And yet—He chooses to reveal Himself within the structure. The laws of physics, the fractals of nature, the logic of moral consequence, the harmony of musical intervals—all testify that creation is not arbitrary. Systems are not divine, but they reflect divine intentionality, symmetry, and sovereignty.

We are not building a new theology of mechanism. We are instead offering a lens through which structure can be interpreted spiritually, and through which spiritual truths can become structurally coherent to those trained in systems and science.

The danger lies in forgetting the direction of the arrow: it points from God into creation, not the other way around.

Role of the Observer: Simultaneous Translation as a Form of Spiritual Gift

Finally, we arrive at the unique human role—and specifically, the role of those who find themselves *simultaneously translating* between scientific formalism and

spiritual revelation. This ability is more than intelligence or training. It may be a charism—a spiritual gift for the age of integration.

In this model:

- The observer is not passive. Like in quantum mechanics, observation collapses ambiguity into trajectory.
- The translator is a Remnant soul who hears a homily and sees a phase portrait. Who reads a prophecy and hears a gradient vector. Who prays and feels the equations dissolve into peace.
- This person, guided by grace, becomes a resonant structure—able to speak to engineers and mystics alike, and to harmonize them.

This is not mere interdisciplinarity. It is incarnational epistemology: knowledge not abstracted, but enfleshed, and walked out in daily faithfulness. The Remnant in this light are not only moral exemplars but ontological bridges, keeping heaven and earth in dialogue during a time of profound disintegration.

This section has proposed that a dynamic bridge between science and prophecy is not only possible but necessary—that it must be walked ethically, humbly, and spiritually, and that it culminates not in theoretical unity, but in the deepening of human faithfulness in an age of systems collapse.

IX. Conclusion

In this paper, we have explored a deep and potentially generative analogy between dynamical systems theory and the spiritual structure of the Christian life, especially as experienced by the Remnant—those who remain faithful in times of profound institutional and eschatological destabilization. Drawing from concepts such as Lagrangians, gradient descent, Lyapunov stability, invariant sets, and bifurcation theory, we have attempted to articulate a spiritual topology: one that

accounts for both the motion of the soul and the structure of the field through which it moves.

This analogy is not merely illustrative—it may be *structural*. It implies that the same God who ordered the cosmos according to elegant physical laws also sustains the soul in its path through grace and suffering, through ascent and descent, through prayer and obedience. Where classical mechanics seeks equilibrium, spiritual life seeks sanctity. Where systems analysis studies stability, the Remnant seeks *perseverance*. The correspondence is not total, but it is enough to justify the pursuit of a new vocabulary—a shared grammar in which science and prophecy can meaningfully converse.

Final Reflections on Being Part of the Remnant

To be part of the Remnant is not to be elite, but to be preserved. Not because of strength or intellect, but because of orientation—a soul fixed on God in a world whose vectors are being rewritten in real time. In the language of this paper, the Remnant occupy a bounded invariant manifold within a turbulent phase space. They are not immune to motion, but their direction is stable. They are subject to perturbations—doubt, loss, betrayal, disillusionment—but these do not destroy their trajectory. Their Lyapunov function—faithfulness—remains negative. They return, realign, endure.

And perhaps most critically, they are not static observers. The Remnant are not called to hide from the system but to participate in its reorientation. They are dynamic witnesses, called not to survive but to signal—to function as boundary conditions, constraints, and attractors for others seeking the same fidelity in a field of confusion.

This is not only a calling. It is a cost.

Call to Discernment in a Time of Destabilization

The current ecclesial and geopolitical moment is, in system terms, a bifurcation point—a time of heightened sensitivity, nonlinear effects, and radically divergent outcomes. During such moments, the system is *especially responsive* to small inputs. This means that discernment becomes a matter of life and death—not just

for individuals, but for entire communities and perhaps for the future trajectory of the Church itself.

In times like these, noise and signal are easily confused. Apparitions may be from heaven—or from delusion. Institutional decisions may preserve the Church—or dissolve it further. Silence may be cowardice—or obedience. Discernment requires:

- Stillness: to detect the true gradient
- Obedience: to follow the vector even when it leads into darkness
- Community: to confirm resonance and reject idiosyncrasy
- Scripture and Spirit: to keep the attractor aligned with eternal truth

Above all, discernment now requires courage—the courage to admit we are in an unstable field, and that the task before us is not to control it, but to *navigate it in faith*.

Future Directions: Formal Models, Public Dialogue, Spiritual Preparation

This paper is a beginning, not a conclusion. It suggests a direction for deeper interdisciplinary integration between systems theory, theology, prophetic tradition, and spiritual formation. Several paths lie ahead:

1. Formal Models: The construction of simplified dynamical systems that simulate soul trajectories under modeled forces of grace, sin, suffering, and revelation. These could be conceptual, pedagogical, or even computational.
2. Public Dialogue: Opening a conversation between scientists, theologians, and mystics—especially those who stand outside traditional institutions. The language of dynamical systems may provide a shared dialect through which unity becomes possible.
3. Spiritual Preparation: Encouraging the Remnant to study systems not merely to understand the world, but to train the soul: to recognize attractors, resist perturbations, and walk the narrow path through the

chaotic field. Prophecy without preparation is sentiment. Preparation is action.

The bridge between science and spirituality is not complete. But it has been opened—and that is enough for now.

The final word is not a formula, but a call:

Remain faithful. Stay in the manifold. Listen for the signal. Follow the gradient. Minimize spiritual action. And become a stabilizing presence in the unfolding field of God's will.

X. References

This section provides a foundation for the interdisciplinary structure of the paper, citing sources that span Scripture, mathematical and physical theory, Marian prophecy, contemporary mysticism, and classical theology. The goal is to show that the synthesis offered here is not an isolated novelty, but rather a continuation of deeply rooted traditions in both divine revelation and human inquiry.

Scriptural Sources

- Isaiah 10:20–22 – "A remnant shall return, the remnant of Jacob, to the mighty God."
  A foundational text for the concept of a faithful subset preserved through judgment.
- Romans 11:5 – "So too at the present time there is a remnant, chosen by grace."
  Paul's affirmation that the concept of the remnant continues into the New Covenant.
- Philippians 2:8 – "He humbled Himself by becoming obedient to the point of death."
  Christ as the archetype of gradient descent—divine humility as movement toward stability.
- 2 Corinthians 4:8–9 – "We are afflicted in every way, but not crushed…"
  A New Testament expression of Lyapunov stability under spiritual perturbation.
- Matthew 7:13–14 – "Enter through the narrow gate…"
  A call to trajectories of fidelity through constrained phase space.

Scientific Literature on Dynamical Systems

- Strogatz, Steven H. *Nonlinear Dynamics and Chaos: With Applications to Physics, Biology, Chemistry, and Engineering*. Westview Press, 2015.
  A foundational textbook for understanding bifurcations, attractors, and phase portraits.
- Khalil, Hassan K. *Nonlinear Systems*. Prentice Hall, 2002.
  An advanced treatment of Lyapunov stability and invariant manifolds.
- Arnold, Vladimir I. *Mathematical Methods of Classical Mechanics*. Springer-Verlag, 1989.
  Provides formal treatment of Lagrangian mechanics and variational principles.
- Ott, Edward *Chaos in Dynamical Systems*. Cambridge University Press, 2002.
  Insight into sensitive dependence on initial conditions and chaotic attractors, applicable to moral and spiritual deviation.
- Pikovsky, Rosenblum, and Kurths *Synchronization: A Universal Concept in Nonlinear Sciences*. Cambridge University Press, 2001.
  Useful in framing spiritual resonance as phase-locking in dynamical behavior.

Approved and Unapproved Marian Apparitions

- Fatima (1917, Portugal) – Approved. Emphasis on repentance, suffering, and fidelity; includes vision of Hell and warnings of global chastisement.
- Akita (1973, Japan) – Approved by local bishop. Echoes Fatima; speaks of fire from the sky, divisions in the Church, and the faithful few.
- Garabandal (1961–1965, Spain) – Not formally approved; speaks of “the Warning” and a time when very few priests will remain faithful.

- Medjugorje (1981–present, Bosnia and Herzegovina) – Not officially approved but widely followed. Focuses on conversion, peace, and preparation for eschatological fulfillment.
- Mission of Divine Mercy (Texas, USA, 21st century) – Unapproved and ongoing. Messages assert a time of final division, a call for spiritual warfare, and the designation of Pope Francis as a “usurper.” Central to this paper’s analysis of prophetic bifurcation.

Writings from the Mission of Divine Mercy

- Father John Mary (Mission of Divine Mercy Homilies and Messages, 2020–2025)
  A consistent theme of preparation for divine judgment, the hidden power of humility, and the call to spiritual stillness. Recent homilies mark the death of Pope Francis as the moment “the battle begins.”
- "Words from the Lord through a Religious Sister" (Mission publications)
  Personal messages received and discerned within the community, including references to the "Children of Light," the final Remnant, and the urgent need for silence and faithfulness.
- Mission Website and Audio Archives
  Primary sources for the prophetic voice guiding the understanding of external perturbations in the spiritual system.

Works by Church Fathers, Saints, and Theologians Engaging with Natural Philosophy

- St. Augustine – *Confessions*, *The City of God*
  Early attempts to unify inner moral structure with divine causality; echoes of dynamical interiority.
- St. Thomas Aquinas – *Summa Theologiae*
  Rigorous application of Aristotelian causality and metaphysical gradation to Christian doctrine; foundational for understanding spiritual teleology.
- St. John of the Cross – *The Dark Night of the Soul*
  A mystical account of descent through spiritual suffering toward divine union, easily mapped onto negative gradient flows.
- St. Teresa of Ávila – *The Interior Castle*
  A model of interior movement through spiritual mansions, or discrete states of the soul within a multidimensional space.
- St. Maximus the Confessor – *Ambigua*
  Explores the cosmic logoi and Christ as the unifying attractor of all created things.
- Pierre Teilhard de Chardin – *The Phenomenon of Man*
  A 20th-century Jesuit who explored spiritual evolution and attractor-like notions in divine convergence toward the Omega Point.
- Joseph Ratzinger (Pope Benedict XVI) – *Introduction to Christianity*
  Insightful reflection on theological structure, mystery, and the intersection of modern understanding with ancient belief.

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Epistemic Dissonance as Rebellion Against the Logos: The Collapse of Meaning and the Narrow Path to Restoration
DOI: 10.13140/RG.2.2.15762.57283
Relevant to your themes of destabilization, bifurcation, and the Remnant navigating collapse through fidelity.

States of Resonance: Heaven, Hell, and Purgatory in an Epistemic Ontology of the Afterlife
DOI: 10.13140/RG.2.2.29852.81281
Directly ties to your discussion of attractors and Lyapunov stability in spiritual phase space.

Resonant Creation: Quantum Emergence, Existential Containment, and the Beatitudes as the Shield of Meaning
DOI: 10.13140/RG.2.2.34088.07682
Supports your spiritual interpretation of dynamical systems through theological ethics and resonance.

The Lagrangian Delay: How the Omission of Dynamical Stability Theory Slowed the Emergence of Emergent Science
DOI: 10.13140/RG.2.2.24152.20488
Foundational for your use of Lagrangians, gradients, and Lyapunov theory in a spiritual framework.

Church Without Walls: Faith for the Remnant
DOI: 10.13140/RG.2.2.22409.56161
A direct theological link to the concept of the Remnant and spiritual fidelity under systemic breakdown.

This reference section, spanning from Isaiah to nonlinear systems theory, from Fatima to Texas, from Thomas Aquinas to Teilhard, represents the architecture necessary to support a theology that is not just symbolic, but structural—and perhaps, even inevitable in the age of AI, instability, and spiritual war.

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